CLAIMS

We claim:

1. A gastric balloon comprising:

a shell;

a receiver;

a valve preventing the undesired addition or elimination of fluid from the gastric balloon; and

a retractable tubing housed in said receiver and extendable from the stomach of a patient to the mouth of the patient, wherein said shell is inflated and deflated from outside the body of the patient via said retractable tubing.

2. The gastric balloon of claim 1 wherein said retractable tubing is formed in one or more spirals.

3. The gastric balloon of claim 1 wherein said retractable tubing is formed in a coil.

4. The gastric balloon of claim 1 wherein said retractable tubing is fluidly connected to the shell via an interface.

5. The gastric balloon of claim 1 wherein said receiver is formed in said shell.

6. The gastric balloon of claim 1 wherein said receiver is a molded valve patch.

7. The gastric balloon of claim 6 wherein said molded valve patch is bonded to said shell.

8. The gastric balloon of claim 1 wherein said receiver divides said shell substantially into two hemispheres.

9. The gastric balloon of claim 8 where said retractable tubing is housed in said receiver by wrapping said tubing around a small diameter portion of said shell formed by said receiver.

10. The gastric balloon of claim 1 wherein said retractable tubing is formed of a material having a memory to return said tubing to the proper shape for housing in said receiver.

11. The gastric balloon of claim 1 wherein said retractable tubing is formed of a soft material comprising a radial spring.

12. The gastric balloon of claim 1 wherein said retractable tubing is formed of a semi-rigid material having a memory to return said tubing to the proper shape for housing in said receiver.

13. The gastric balloon of claim 1 wherein said retractable tubing comprises a shape memory alloy to return said tubing to the proper shape for housing in said receiver.

14. The gastric balloon of claim 1 further comprising a cap for sealing said receiver.

15. The gastric balloon of claim 1 further comprising a torsionally loaded axle, wherein said torsionally loaded axle resists removal of said retractable tubing from said receiver and returns said retractable tubing to said receiver for housing.

16. The gastric balloon of claim 15 wherein said torsionally loaded axle is located vertically with respect to said receiver.

17. The gastric balloon of claim 15 wherein said torsionally loaded axle is located horizontally with respect to said receiver.

18. The gastric balloon of claim 15 wherein said torsionally loaded axle includes a pre-grooved surface for accommodating said retractable tubing.

19. The gastric balloon of claim 1 wherein said valve is a slit valve.

20. The gastric balloon of claim 1 wherein said valve is a septum.

21. A method of adjusting the volume of fluid in an implanted gastric balloon comprising the steps of:

inserting a gastroscopic tool into the stomach of a patient having a gastric balloon implanted therein;

grasping an end of a retractable tubing housed in a receiver of the gastric balloon;

withdrawing at least a portion of the retractable tubing from the stomach and out of the patients mouth; and

adding fluid to or removing fluid from the gastric balloon via the retractable tubing withdrawn from the patient.

22. The method of claim 21 wherein the fluid is added to or removed from the gastric balloon using a syringe and needle.

23. The method of claim 22 wherein the needle pierces a septum on the retractable tubing.

24. The method of claim 22 wherein the needle is inserted into a valve on the retractable tubing.

25. The method of claim 21 wherein the fluid is added to or removed from the gastric balloon using a tube having a shaped tip.

26. The method of claim 21 further comprising the step of releasing the retractable tubing after adding or removing fluid from the gastric balloon.

27. The method of claim 26 wherein the retractable tubing retracts into the stomach of the patient.

28. The method of claim 27 wherein the retractable tubing retracts into the receiver.

29. The method of claim 28 wherein the said retracting step is performed by a memory component of the retractable tubing.

30. The method of claim 28 wherein said retracting step is performed by a torsionally loaded axle.

31. A method of treating obesity comprising the steps of:

implanting a gastric balloon having a shell, a receiver, a valve preventing the undesired addition or elimination of fluid from the gastric balloon, and a retractable tubing housed in the receiver and extendable from the stomach of a patient to the mouth of the patient, wherein said shell is inflated and deflated from outside the body of the patient via the retractable tubing;

inflating the gastric balloon to a first desired level to promote acclimatization of the gastric balloon in the stomach and to minimize nausea in the patient;

periodically increasing the volume of the gastric balloon to subsequent desired levels known to minimize nausea and to achieve a continuous, regular, and safe rate of weight loss.

32. The method of claim 31 further comprising the step of deflating the gastric balloon for removal upon cessation of treatment.

33. A method of implanting a gastric balloon comprising the steps of:

providing a gastric balloon including a shell, a receiver, and a retractable tubing housed in the receiver and extendable from the stomach of a patient to the mouth of the patient;

removing the retractable tubing from the receiver to minimize the volume of the uninflated gastric balloon;

gastroscopically implanting the gastric balloon in the stomach of a patient while maintaining at least a portion of the retractable tubing outside the mouth of the patient;

inflating the gastric balloon to a desired level; and

releasing the retractable tubing to promote retraction of the retractable tubing into the stomach of the patient.

34. The method of claim 33 wherein upon retraction of the retractable tubing, the retractable tubing is returned to the receiver for storage.